

Revision notes

“The effects of tillage methods on soil aggregation and crop yields in a wheat-corn rotation under semi-arid conditions” submitted by Hossein tabiehzad¹, Gokhan Cayci², Kiarash Afshar Pour Rezaeieh^{3*} (MS No.: se-2017-13)

1) Comments from Anonymous Referee II

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Review comments on solid Earth Discuss10.5194-2017-13 The effects of tillage methods on soil aggregation 1 and crop yields in a 2 wheat-corn rotation under semi-arid conditions Dear Editor, This study has merit but I'm afraid this present document needs to be thoroughly reworked before publication is granted. There are many issues for this paper to reach the level of international publications but I feel this is feasible providing the authors dedicate enough effort on it.

The first issue concerns the fact that any new research should convince on its novelty and this can only be done by (1) acknowledging the existing literature on the subject; (2) discussing the existing finding and identifying research gap(s); (3) clearly stating the research objectives. From the first few sentences of the abstract, it can easily be seen that the papers does not provide this kind of information. The introduction section is also lacking presenting what has been done on the impact of tillage on grain yield and soil properties.

The writing is not precise

enough with main grammatical issues. The first sentence of the abstract below does not sound scientific: “wheat-corn two-course rotation system on the some soil aggregation properties and yields were investigated” what is “on the some soil aggregation properties” what type of “yields” is it about? Below are some tips With best regards
Abstract 14 In this study, the effects of different tillage methods under wheatcorn two-course rotation 15 system on the some soil aggregation properties and yields were investigated. Experiment 16 was laid out in a split plot design with three replications during four crop years. Subsoiler, 17 moldboard, sweep and chisel as main plots and rotary tiller and disc harrow as sub-plots 18 have been used in this study. The results showed that tillage methods were significant at 19 ($P < 0.01$) as regards crop yields, and the highest yields as 6249 and 11720 kg/ha for wheat 20 and 9891 and 73080 kg/ha for corn grain and biomass were produced in subsoiler treatment, 21 respectively.

Subsoiler+rotarytiller treatment was significant at ($P < 0.05$) with 2.063 mm as 22 to mean weight diameter (MWD) value. The subsoiler and chisel were statistically in the 23 same group with regard of water stable aggregates (WSA) value, and it was significant at 24 ($P < 0.05$) with 67,83%. Bulk density, total porosity and air porosity values were significant at ($P < 0.01$), and 1.38 g/cm³, 51.2% and 12.5% values were determined in rotary tiller 26 application, respectively. Field capacity (FC) and permanent wilting point (PWP) were 27 significant at ($P < 0.05$) and ($P < 0.01$) with 31.89% and 17.21% values in the chisel 28 treatment, respectively. Crop yields and positive effects on the physical properties were 29 considered subsoiler+rotary tiller treatment was the most successful, and it was followed by 30 chisel+rotary tiller treatment according to four-year study results.

